

REMARKS

Claims 1-18 remain pending in the application, with Claims 1 and 13 being independent claims. Claims 1-4 and 13-16 are again rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Lieu (U.S. Patent Application Publication No. 2003/0157971 A1). Claims 5, 6, 12, 17 and 18 are again rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lieu in view of Cline (U.S. Patent No. 4,710,876). Claims 7-11 are again rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lieu in view of Hansen (U.S. Patent No. 4,445,011).

In response to the previous Office Action, Applicant argued that an object sensed by the sensing device of the present invention is patentably different from an object sensed the keyboard-open sensor of Lieu, and that Lieu, Cline, Hansen, or any combination thereof, failed to teach or reasonably suggest the recitations in the claims.

The Examiner responded by stating, on pages 10 and 11 of the Office Action, that Lieu detects the orientation of the terminal. In particular, the Examiner states that Lieu senses the orientation of the display screen with a sliding or moving ball from one hemispherical detent to the next and per sensor sensing and generating signal to processor displaying image per detected final orientation and displaying the image in the upright position, as allegedly described by Lieu in paragraphs 61 and 62.

Applicant strongly disagrees with the Examiner because the Examiner has misrepresented the disclosure of Lieu. In particular, on pages 10 and 11 of the Office Action, the Examiner states that Lieu discloses “sensing the orientation of the display screen with sliding or moving ball from one hemispherical dent to next and per sensor sensing and generating signal to processor displaying image per detected final orientation and displaying the image in the upright position”. The Examiner further states that, in paragraph 55 of Lieu, “Lieu without going in detail calls this as an automatic operation” (emphasis added). These assertions by the Examiner are wrong for at least the following reasons.

In paragraph 55, Lieu merely explains that the portable terminal 100, shown in FIG. 1, is capable of automatically electronically rotating the image in the display screen 232 and is also capable of electronically rotating the image on command from the user. Automatic rotation is triggered as a user rotates the housing 340 away from the base 338 to open the portable terminal 100. When the keyboard-open sensor 122 senses that the portable terminal 100 is being opened, the keyboard-open sensor 122 sends a signal to the control circuitry 102. When the signal is received by the control circuitry 102, image-rotating processing rotates the image in the display screen 232. This automatic electronic rotating of the image only occurs based on signals generated by the keyboard-open sensor 122. As Lieu specifically explains in paragraph 40, the keyboard-open sensor 122 is merely a device that senses when the keyboard 116 is in the open position.

Lieu nowhere describes “sensing the orientation of the display screen with sliding or moving ball from one hemispherical dent to next”, as erroneously purported by the Examiner. Lieu describes, in paragraph 56, that a user can cause an image in the display screen 232 to electronically rotate by an explicit command. In paragraph 60, Lieu describes how a “second way to rotate the image is to physically rotate display 228 (or display screen 232)” (emphasis added). Lieu describes *physical* rotation of the display 228 in paragraph 61, where Lieu explains that the portable terminal 100 must be specifically configured or adapted to enable the display 232 to rotate independently of the housing 340 and the base 338.

The arrangement shown in FIGS. 8A and 8B consist of a ball 858 and two hemispherical detents 860A and 860B. When the ball 858 engages the detent 860A, the display 228 locks in place with the orientation depicted in FIG. 8A. With turning force by a user, the ball 858 disengages from the detent 860A and the display 228 is free to rotate. With continued rotation, the ball 858 engages the detent 860B, such that the display 228 is locked in place with the orientation depicted in FIG. 8B.

The sliding or moving ball referred to by the Examiner corresponds to the ball 858 in Lieu. As plainly evident by paragraph 61 of Lieu, the ball 858 is not a sensor that senses the orientation of the display 228. The ball 858 is merely a physical configuration of the portable terminal 100 that enables the display 232 to rotate independently of the housing 340 and the base 338. This physical rotation of the display 232 is effected by a user and does not occur based on any signals effected by a sensor, as erroneously purported by the Examiner.

As previously discussed in the Response that Applicant filed on July 11, 2007, Lieu only rotates the image on the display screen 90 degrees based on whether the portable terminal is opened or closed. Lieu nowhere teaches or reasonably suggests sensing a rotating direction and angle of the screen, and nowhere teaches or reasonably suggests rotating the image on the display screen any angle within a range of 0 degrees and 360 degrees based on the rotating direction and angle of the screen.

Furthermore, a rotation disclosed in Lieu is not directed to the rotation of the screen, but to movement for opening the keyboard 116. For example, Lieu explains in paragraph 55 that "automatic rotation is triggered as a user rotates housing 340 away from base 338 to open portable terminal 100. More particularly, when keyboard open sensor 122 senses that the portable terminal 100 is being opened, it sends a signal to control circuitry 102. When the signal is received by control circuitry 102, image-rotating processing rotates the image in display screen 232". In other words, the rotation of Lieu is directed to the movement for opening the keyboard 116, i.e., the movement of opening the housing 340 from base 338, as illustrated in Figs. 5A-5D of Lieu, and at this time, keyboard open sensor 122 senses the movement of opening of keypad. Lieu differs from the present invention on the above grounds for at least these reasons.

Further, Lieu shows in Figs. 8A and 8B and explains in paragraph 61 that the display 228 and not the image 232 is rotated according to whether ball 858 is located in either hemispherical detent 860A or 860B. As previously mentioned, the ball 858 and the two hemispherical

detents 860A and 860B are only for rotating and fixing the display 228, rather than for detecting the rotation of 232 on the display 228.

Lieu discusses electronic rotation of the image 232 using Figs 9A, 9B, and paragraph 62. However, Lieu states in paragraph 63 that "Assume that the user opens portable terminal 100. And, in conjunction with this, assume that the image in display 232 is electronically rotated as described above". Applicant respectfully submits that Lieu differs from the claimed invention because Lieu is nowhere related to the rotation of screen but to the movement for opening of the keypad. That is, Lieu fails to teach or reasonably suggest rotating the data displayed by sensing the rotation and rotation direction of screen, as recited in the claims.

Additionally, as recited in Claim 1, a format of the data displayed on the screen is converted in an opposite direction of the determined direction by converting coordinate values of the data in order to display the data in an upright position. Screen displays include, for example, (1) data being displayed in the upright direction after lighting off, such as a pivot function of a PC monitor, in the event of rotating the screen by 90° in a clockwise direction, (2) data being displayed in the upright direction, in the event of rotating the data by 270° in a clockwise direction (same direction as the screen rotation direction), and (3) data being displayed in the upright direction, in the event of rotating the data by 90° in a counterclockwise direction (the opposite direction of the screen rotation direction). Among these three examples, the claimed invention corresponds to the third example. Lieu fails to teach or reasonably suggest the recitations of Claim 1 or similar recitations in Claim 13.

For at least these reasons, the Examiner has failed to establish a *prima facie* case of anticipation of Claims 1-4 and 13-16 based on Lieu.

With respect to Claims 5-12, 17 and 18, Cline describes a system and method for the display of surface structures contained within the interior region of a solid body, and Hansen describes a freestanding multidirectional electrical control device. Cline and Hansen both fail to supplement the deficiencies of Lieu.

More particularly, Lieu, Cline, Hansen, or any combination thereof, fails to teach or reasonably suggest a portable terminal for displaying data on a screen, the portable terminal comprising: a video processor for converting the data into a displayable format according to characteristics and size of the screen so that the data can be displayed on the screen; a sensing device for sensing rotation of the screen, the sensing device generating a sensing signal according to a rotating direction of the screen; and a controller for determining the rotating direction of the screen according to the sensing signal, and controlling the video processor to convert a format of the data in an opposite direction of the determined rotating direction by converting coordinate values of the data in order to display the data in an upright direction.

Accordingly, Claims 1 and 13 are allowable over Lieu, Cline, Hansen, or any combination thereof.

While not conceding the patentability of the dependent claims, *per se*, Claims 2-12 and 14-18 are also allowable for at least the above reasons.

Accordingly, all of the claims pending in the Application, namely, Claims 1-18, are in condition for allowance. Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicant's attorney at the number given below.

Respectfully submitted,



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